

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-20 (Canceled).

Claim 21 (Currently Amended): A soldering flux comprising:
an adhesive resin including a thermo-setting resin that starts heat-hardening approximately at the reflow temperature; and a hardening agent, wherein: said hardening agent includes including at least two types of carboxylic acids having melting points that are different from each other.

Claim 22 (Previously Presented): The soldering flux of claim 21, assuming a liquid form.

Claim 23 (Previously Presented): The soldering flux of claim 21, assuming a paste form.

Claim 24 (Canceled).

Claim 25 (Currently Amended): The soldering flux of claim 24 21, wherein:
said thermo-setting resin is selected from the group consisting of epoxy resin, phenol resin, polyimide resin, silicon resin, modified resin and acrylic resin.

Claim 26 (Previously Presented): The soldering flux of claim 21 wherein:
one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acid is pimelic acid.

Claim 27 (Previously Presented): The soldering flux of claim 26, represented by the formula:

$$a : b = (85 : 15) \text{ to } (95 : 5)$$

wherein 'a' is content (mass%) of said adipic acid and 'b' is content (mass%) of said pimelic acid.

Claim 28 (Previously Presented): The soldering flux of claim 21, wherein:
one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acids is succinic acid.

Claim 29 (Previously Presented): The soldering flux of claim 28, represented by the formula:

$$a : c = (95 : 5) \text{ to } (25 : 75)$$

wherein 'a' is content (mass%) of said adipic acid and 'c' is content (mass%) of said succinic acid.

Claim 30 (Currently Amended): A soldering paste comprising:
soldering powder; and
a soldering flux mixed with said soldering powder, wherein:
said soldering flux comprises an adhesive resin including a thermo-setting resin that starts heat-hardening approximately at the reflow temperature; and a hardening agent, and
said hardening agent includes including at least two types of carboxylic acids having melting points that are different from each other.

Claim 31 (Canceled).

Claim 32 (Currently Amended): The soldering paste of claim ~~31~~ 30, wherein:
said thermo-setting resin is selected from the group consisting of epoxy resin, phenol
resin, polyimide resin, silicon resin, modified resin and acrylic resin.

Claim 33 (Previously Presented): The soldering paste of claim 30 wherein:
one of said two types of carboxylic acids is adipic acid and another of said two types
of carboxylic acid is pimelic acid.

Claim 34 (Previously Presented): The soldering paste of claim 33, represented by the
formula:

$$a : b = (85 : 15) \text{ to } (95 : 5)$$

wherein 'a' is content (mass%) of said adipic acid and 'b' is content (mass%) of said
pimelic acid.

Claim 35 (Previously Presented): The soldering paste of claim 30, wherein:
one of said two types of carboxylic acids is adipic acid and another of said two types
of carboxylic acids is succinic acid.

Claim 36 (Previously Presented): The soldering paste of claim 35, represented by the
formula:

$$a : c = (95 : 5) \text{ to } (25 : 75)$$

wherein 'a' is content (mass%) of said adipic acid and 'c' is content (mass%) of said
succinic acid.

Claim 37 (Previously Presented): The soldering paste of claim 30, wherein:
said soldering powder includes a component selected from the group consisting of Sn,
Cu, Ag, Sb, Pb, In, Zn and Bi.

Claim 38 (Currently Amended): An electronic component device comprising:
a component mounting board;
an electronic component soldered onto said component mounting board; and
a soldering flux between said component mounting board and said electronic
component to bond said component mounting board and said electronic component to each
other, wherein:

said soldering flux comprises an adhesive resin including a thermo-setting resin that
starts heat-hardening approximately at the reflow temperature; and a hardening agent, and
said hardening agent includes including at least two types of carboxylic acids having melting
points that are different from each other.

Claim 39 (Previously Presented): The electronic component device of claim 38,
wherein:

said soldering flux assumes a liquid form.

Claim 40 (Previously Presented): The electronic component device of claim 38,
wherein:

said soldering flux assumes a paste form.

Claim 41 (Canceled).

Claim 42 (Currently Amended): The electronic component device of claim 41 38,
wherein:

said thermo-setting resin is selected from the group consisting of epoxy resin, phenol resin, polyimide resin, silicon resin, modified resin and acrylic resin.

Claim 43 (Previously Presented): The electronic component device of claim 38
wherein:

one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acid is pimelic acid.

Claim 44 (Previously Presented): The electronic component device of claim 43,
represented by the formula:

$$a : b = (85 : 15) \text{ to } (95 : 5)$$

wherein 'a' is content (mass%) of said adipic acid and 'b' is content (mass%) of said pimelic acid.

Claim 45 (Previously Presented): The electronic component device of claim 38,
wherein:

one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acids is succinic acid.

Claim 46 (Currently Amended): The electronic component device of claim 35 45,
represented by the formula:

$$a : c = (95 : 5) \text{ to } (25 : 75)$$

wherein 'a' is content (mass%) of said adipic acid and 'c' is content (mass%) of said succinic acid.

Claim 47 (Currently Amended): An electronic circuit module comprising:
a chip mounting board;
a semiconductor chip having at least one semiconductor element soldered onto said chip mounting board; and
a soldering flux between said chip mounting board and said semiconductor chip to bond said chip mounting board and said semiconductor chip to each other, wherein:
said soldering flux comprises an adhesive resin including a thermo-setting resin that starts heat-hardening approximately at the reflow temperature; and a hardening agent, and said hardening agent includes including at least two types of carboxylic acids having melting points that are different from each other.

Claim 48 (Previously Presented): The electronic circuit module of claim 47, wherein:
said soldering flux assumes a liquid form.

Claim 49 (Previously Presented): The electronic circuit module of claim 47, wherein:
said soldering flux assumes a paste form.

Claim 50 (Canceled).

Claim 51 (Previously Presented): The electronic circuit module of claim 50 47, wherein:

said thermo-setting resin is selected from the group consisting of epoxy resin, phenol resin, polyimide resin, silicon resin, modified resin and acrylic resin.

Claim 52 (Previously Presented): The electronic circuit module of claim 47 wherein: one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acid is pimelic acid.

Claim 53 (Previously Presented): The electronic circuit module of claim 52, represented by the formula:

$$a : b = (85 : 15) \text{ to } (95 : 5)$$

wherein 'a' is content (mass%) of said adipic acid and 'b' is content (mass%) of said pimelic acid.

Claim 54 (Previously Presented): The electronic circuit module of claim 47, wherein: one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acids is succinic acid.

Claim 55 (Previously Presented): The electronic circuit module of claim 54, represented by the formula:

$$a : c = (95 : 5) \text{ to } (25 : 75)$$

wherein 'a' is content (mass%) of said adipic acid and 'c' is content (mass%) of said succinic acid.

Claim 56 (Currently Amended): An electronic circuit apparatus comprising:
a motherboard;

an electronic circuit module soldered onto said motherboard; and
a soldering flux between said motherboard and said electronic circuit module to bond
said motherboard and said electronic circuit module to each other, wherein:
said soldering flux comprises an adhesive resin including a thermo-setting resin that
starts heat-hardening approximately at the reflow temperature; and a hardening agent, and
said hardening agent includes including at least two types of carboxylic acids having melting
points that are different from each other.

Claim 57 (Previously Presented): The electronic circuit apparatus of claim 56,
wherein:

said soldering flux assumes a liquid form.

Claim 58 (Previously Presented): The electronic circuit apparatus of claim 56,
wherein:

said soldering flux assumes a paste form.

Claim 59 (Canceled).

Claim 60 (Currently Amended): The electronic circuit apparatus of claim 59 56,
wherein:

said thermo-setting resin is selected from the group consisting of epoxy resin, phenol
resin, polyimide resin, silicon resin, modified resin and acrylic resin.

Claim 61 (Previously Presented): The electronic circuit apparatus of claim 56
wherein:

one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acid is pimelic acid.

Claim 62 (Previously Presented): The electronic circuit apparatus of claim 61, represented by the formula:

$$a : b = (85 : 15) \text{ to } (95 : 5)$$

wherein 'a' is content (mass%) of said adipic acid and 'b' is content (mass%) of said pimelic acid.

Claim 63 (Previously Presented): The electronic circuit apparatus of claim 56, wherein:

one of said two types of carboxylic acids is adipic acid and another of said two types of carboxylic acids is succinic acid.

Claim 64 (Previously Presented): The electronic circuit apparatus of claim 63, represented by the formula:

$$a : c = (95 : 5) \text{ to } (25 : 75)$$

wherein 'a' is content (mass%) of said adipic acid and 'c' is content (mass%) of said succinic acid.

Claim 65 (Currently Amended): A soldering method implemented by using a flux, wherein:

said flux comprises: comprising
an adhesive resin including a thermo-setting resin that starts heat-hardening
approximately at the reflow temperature; and

a hardening agent ~~agent, wherein:~~

~~said hardening agent includes~~ including at least two types of carboxylic acids having melting points that are different from each other.

Claim 66 (Previously Presented): The soldering method of claim 65, implemented to solder any one of an electronic component, an electronic circuit module and a semiconductor chip onto a board.

Claim 67 (Currently Amended): A soldering method implemented by using a soldering paste comprising soldering powder mixed with a soldering flux, wherein:

said soldering flux comprises:

an adhesive resin including a thermo-setting resin that starts heat-hardening approximately at the reflow temperature; and

~~a hardening agent~~ agent, and said hardening agent includes including at least two types of carboxylic acids having melting points that are different from each other.

Claim 68 (Previously Presented): The soldering method of claim 67, implemented to solder any one of an electronic component, an electronic circuit module and a semiconductor chip onto a board.

Claim 69 (Previously Presented): The soldering method of claim 67, including the steps of:

executing a soldering process at one surface of said board by using said soldering paste, and

soldering an electronic component onto another surface of said board with a solder different from said soldering paste.

Claim 70 (New): A soldering flux comprising:

an adhesive resin including a thermo-setting resin; and

a hardening agent including two types of carboxylic acids having melting points that are different from each other, wherein:

the carboxylic acid with the lower melting point functions as a hardening agent at the reflow temperature; and

the carboxylic acid with the higher melting point melts at a repair temperature set higher than the reflow temperature, and thereby lowers the viscosity of said adhesive resin.

Claim 71 (New): The soldering flux of claim 70, wherein:

said thermo-setting resin starts heat-hardening approximately at said reflow temperature.

Claim 72 (New): A soldering paste comprising:

soldering powder; and

a soldering flux mixed with said soldering powder, said soldering flux comprising:

an adhesive resin including a thermo-setting resin; and

a hardening agent including two types of carboxylic acids having melting points that are different from each other, wherein:

the carboxylic acid with the lower melting point functions as a hardening agent at the reflow temperature; and

the carboxylic acid with the higher melting point melts at a repair temperature set higher than the reflow temperature, and thereby lowers the viscosity of said adhesive resin.

Claim 73 (New): The soldering paste of claim 72, wherein:
said thermo-setting resin starts heat-hardening approximately at said reflow temperature.

Claim 74 (New): An electronic component device comprising:
a component mounting board;
an electronic component soldered onto said component mounting board; and
a soldering flux between said component mounting board and said electronic component to bond said component mounting board and said electronic component to each other, wherein:

said soldering flux comprises:
an adhesive resin including a thermo-setting resin; and
a hardening agent including two types of carboxylic acids having melting points that are different from each other, wherein:
the carboxylic acid with the lower melting point functions as a hardening agent at the reflow temperature; and
the carboxylic acid with the higher melting point melts at a repair temperature set higher than the reflow temperature, and thereby lowers the viscosity of said adhesive resin.

Claim 75 (New): The electronic component device of claim 74, wherein:
said thermo-setting resin starts heat-hardening approximately at said reflow
temperature.

Claim 76 (New): An electronic circuit module comprising:
a chip mounting board;
a semiconductor chip having at least one semiconductor element soldered onto said
chip mounting board; and
a soldering flux between said chip mounting board and said semiconductor chip to
bond said chip mounting board and said semiconductor chip to each other, wherein:
said soldering flux comprises:
an adhesive resin including a thermo-setting resin; and
a hardening agent including two types of carboxylic acids having melting
points that are different from each other, wherein:
the carboxylic acid with the lower melting point functions as a hardening
agent at the reflow temperature; and
the carboxylic acid with the higher melting point melts at a repair temperature
set higher than the reflow temperature, and thereby lowers the viscosity of said
adhesive resin.

Claim 77 (New): The electronic circuit module of claim 76, wherein:
said thermo-setting resin starts heat-hardening approximately at said reflow
temperature.

Claim 78 (New): An electronic circuit apparatus comprising:

a motherboard;

an electronic circuit module soldered onto said motherboard; and

a soldering flux between said motherboard and said electronic circuit module to bond said motherboard and said electronic circuit module to each other, wherein:

said soldering flux comprises:

an adhesive resin including a thermo-setting resin; and

a hardening agent including two types of carboxylic acids having melting points that are different from each other, wherein:

the carboxylic acid with the lower melting point functions as a hardening agent at the reflow temperature; and

the carboxylic acid with the higher melting point melts at a repair temperature set higher than the reflow temperature, and thereby lowers the viscosity of said adhesive resin.

Claim 79 (New): The electronic circuit apparatus of claim 78, wherein:

said thermo-setting resin starts heat-hardening approximately at said reflow temperature.

Claim 80 (New): A soldering method implemented by using a flux, wherein:

said flux comprises:

an adhesive resin including a thermo-setting resin; and

a hardening agent including two types of carboxylic acids having melting points that are different from each other, wherein:

the carboxylic acid with the lower melting point functions as a hardening agent at the reflow temperature; and

the carboxylic acid with the higher melting point melts at a repair temperature set higher than the reflow temperature, and thereby lowers the viscosity of said adhesive resin.

Claim 81 (New): The soldering method of claim 80, wherein:
said thermo-setting resin starts heat-hardening approximately at said reflow temperature.

Claim 82 (New): The soldering method of claim 80, implemented to solder any one of an electronic component, an electronic circuit module and a semiconductor chip onto a board.

Claim 83 (New): A soldering method implemented by using a soldering paste comprising soldering powder mixed with a soldering flux, wherein:
said soldering flux comprises:
an adhesive resin including a thermo-setting resin; and
a hardening agent including two types of carboxylic acids having melting points that are different from each other, wherein:
the carboxylic acid with the lower melting point functions as a hardening agent at the reflow temperature; and
the carboxylic acid with the higher melting point melts at a repair temperature set higher than the reflow temperature, and thereby lowers the viscosity of said adhesive resin.

Claim 84 (New): The soldering method of claim 83, wherein:
said thermo-setting resin starts heat-hardening approximately at said reflow
temperature.

Claim 85 (New): The soldering method of claim 83, implemented to solder any one
of an electronic component, an electronic circuit module and a semiconductor chip onto a
board.